Notes - Solutions by Factoring + Z.P.P.

Zero Product Property: If $a \cdot b = 0$, then either $a = 0$ or $b = 0$.

- Make sure the function $= 0$ before you factor

Ex: Solve $x^2 + 8x = -12$

$+12 \quad +12$

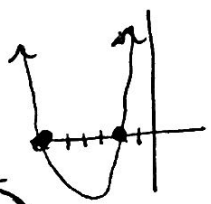
$x^2 + 8x + 12 = 0$

$(x+6)(x+2) = 0$

$x+6 = 0$ or $x+2 = 0$

$-6 \quad -6 \qquad -2 \quad -2$

$x = -6$ $\qquad$ $x = -2$



Ex 2: Solve $8x^2 - 2x = 0$

$2x(4x-1) = 0$

$2x = 0$ or $4x - 1 = 0$

$x = 0$ $\qquad$ $x = 1/4$

Ex 3: $(x-3)^2 = 0$

$x - 3 = 0$

$x = 3$ Multiplicity of 2